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PHONOGRAM

A MONTHLY MAGAZINE

DEVOTED TO

THE SCIENCE OF SOUND . .

+AND+

.. RECORDING OF SPEECH.

PUBLISHED BY

THE NATIONAL PHONOGRAPH PUB. CO., L'D.

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Philadelphia, October 7th, 1890. 189

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THE PHONOGRAM.

VOL. I.

JUNE AND JULY, 1891.

Nos. 6—7.

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Eastern Penn'a	Philadelphia, Penn.	Eastern part of State of Penn'vania.
Florida	Jacksonville, Fla.	Florida.
Georgia	Atlanta, Ga.	Georgia.
Iowa	Sioux City, Iowa	Iowa.
Indiana State Agency	Indianapolis, Ind.	E. R. Magie, Ag't, "When" Block.
Kansas Phonograph Co.	Topeka, Kan.	Kansas and New Mexico.
Kentucky	Louisville, Ky.	Kentucky.
Louisiana	New Orleans, La.	Louisiana.
Michigan	Detroit, Mich.	Michigan.
Missouri	St. Louis, Mo.	Missouri, Arkansas, and Indian Ter.
Minnesota	Minneapolis, Minn.	Minnesota.
Montana	Helena, Mont.	Montana.
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Agents for the North American Phonograph Co.



A MAGAZINE devoted to all interests connected with the recording of sound, the reproduction and preservation of speech, the Telephone, the Typewriter, and the progress of Electricity.

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ADVERTISEMENTS.

THE PHONOGRAM, having special facilities in its circulation through the vast commercial system occupied by the Phonograph, Telephone, and other Electrical Devices, presents an exceptionally valuable advertising medium. The rates are reasonable and will be furnished on application.

CORRESPONDENCE

relating to the Phonograph, Typewriter, or Electricity, in any of their practical applications, is cordially invited, and the cooperation of all electrical thinkers and workers earnestly desired. Clear, concise, well-written articles are especially welcome; and communications, views, news items, local newspaper clippings, or any information likely to interest electricians, will be thankfully received and cheerfully acknowledged.

ARE YOU IN TOUCH WITH THE TIMES?

To the business man who plods along in the old ruts of obsolete business methods, and wonders why his profits do not increase and his cash balance augment like that of his enterprising neighbor, the above query is propounded.

Time, in this progressive age, more than ever, means money.

Some years ago certain business firms essayed to maintain a kind of respectability by adhering to the time-honored pen-written correspondence, rejecting the type-writer, upon its advent, as plebeian and destructive of individuality. The cheap and tawdry mountebank could make as great a show of respectability as the most aristocratic house in the country.

But this is all changed. The rush and whirl of modern business have forced the conviction upon the most conservative that profits, rather than taste, are the matters of first consideration. They have seen, to their dismay, the humbler but more enterprising firms outstrip them in the race for wealth and prominence, and have been compelled to yield to the inevitable—*i. e.*, adopt labor-saving machinery to replace the mentally and physically racking methods of the effete past.

The chiefs of business concerns no longer sit lazily at their desks dictating to a stenographer replies to a mass of correspondence, which must be transcribed in the old, slow, laborious way by an army of clerks before they are ready for transmission. Instead of that, these chiefs now recline in comfortable arm-chairs and pour their eloquence, or crisp business periods, as the case may be, into the receiving trumpet of a phonograph, and wonder how they ever did business without it.

Another revolution in business methods is the employment of ladies in the counting-house. This is the direct fruit of the type-writer and the phonograph. In the good old days woman was looked upon as a nuisance about an office; but now her gentle presence and subtle touch are as indispensable as the machines themselves.

Do not attempt longer to do business on the old lines, if you expect to keep pace with the age. The sooner you adopt the modern methods, the sooner will your expenses begin to diminish and your profits increase. And, what is better, your life and mental energies will be prolonged by being released from the strain now imposed upon you.

The phonograph says to you: "Try me, and if I do not fill the bill, you may return to primitive methods." The world moves, and if you are not satisfied with the phonograph at first, next month

or next year you will be, and the streets will re-echo with your praises of its merits, while those who were quicker to appreciate it and passed you on the road to success will pause long enough to congratulate you upon being at last "in touch with the spirit of the times."

RESTRICTED SALE OF PHONOGRAPHS.

As we go to press the official announcement comes that the Columbia Phonograph Company, Wisconsin Phonograph Company, Kentucky Phonograph Company, Pacific Phonograph Company, the Eastern Pennsylvania Phonograph Company and the New England Phonograph Company have applied for permission to sell the phonograph, and that in the States controlled by these companies they are now for sale.

The Columbia Phonograph Company, controlling the Phonograph in Delaware, Maryland, and the District of Columbia, was the first company to receive authority for the restricted sale of these machines, and on Monday, July 20th, offered its subscribers and the public the option of rental or purchase.

THE STORAGE BATTERY SUIT DECIDED IN FAVOR OF BRUSH.

The Brush Electric Company have scored another victory in the accumulator case. There has been for many years a vigorous litigation on this question. The point at issue from the beginning has been the validity of the patents granted to Charles F. Brush for improvements in secondary batteries. The case will be appealed, and the final decision will probably not be very long delayed.

Up to the present time comparatively little has been accomplished in the way of procuring a thoroughly practicable accumulator.

The phonograph is, in a measure, dependent upon a battery whose capacity is unlimited and whose commercial value is within the reach of all; therefore, we trust that the victorious company will push ahead and justify the value of Mr. Brush's claims by giving us a storage battery beyond all precedent.

THE VIEWS OF AN EMINENT JURIST.

We desire especially to call the attention of our readers to the very able article presented in these pages on the subject of the phonograph as an adjunct to every business house, by Judge Seymour

D. Thompson, one of the judges of the Court of Appeals of St. Louis, Missouri, and editor of the *American Law Review*. When men like Judge Thompson give such unprejudiced views, surely the instrument must possess more than ordinary merit.

He seizes all these points of value as presented by the phonograph in its relation to the public, and sets them forth in so logical and forcible a manner that no fair mind can doubt the importance of the information he brings.

We also desire to call attention to the article of Governor Northen, of Georgia, one of the ablest and most progressive men identified with the New South. Governor Northen thinks, as we all do, that the phonograph possesses almost God-given attributes.

MENTAL FIBER IN AMERICA.

So quickly vibrate on the air the notes of progress and change in this stirring, palpitating federation of States styled the American Union, that one might almost count their arrival by the ticking of a clock. An industry built up to-day swells into giant proportions to-morrow. The pastoral, agricultural Arcadia of one decade assumes in the next the grimy lineaments of a mining camp or the smoke and glare of a manufacturing district. The elements of nature are treated by man as the musician uses his gamut, or the writer his store-house of ideas and his vocabulary. Not alone has nature opened a fountain in the desert of Arizona, but she seems to have conferred new fountains of thought upon man, fertilizing his brain and stimulating his inventive faculties to an extraordinary degree.

One inventor in London composes a species of fuel that is smokeless. It is made of coal-dust and certain chemicals which destroy the sooty particles. This will be a *sine qua non* in cities like London, Pittsburg, and many other large manufacturing towns.

Burton's Electric Heater has also appeared on the *tapis*, for which railroad men and house-keepers will be equally grateful. The making of tin plate in the United States is no longer a petty industry or a concealed fact. The manufacture of iron in the South has loomed up into gigantic proportions, and Pennsylvania will in future be unable to compete with the establishments located in an area running over North Carolina, Georgia, Tennessee, and Alabama.

The American Silk Manufacturing Company patents an electric friction towel, so useful that an electric light plant, two artificial ice factories,

several brass works, two coal mines, and two machine shops have adopted them; besides which, a business house in Pittsburg has ordered five bales of them.

The able editor of the *Age of Steel* sounds a note of warning, however, in the matter of developing industries, as to "risks." He makes a good argument in favor of large corporations, which, he says, control or diminish risks.

A STAY IN THE EDISON LAMP SUIT.

Judge Wallace granted last week a stay of proceedings in the decree for an injunction against the United States Electric Lighting Company, pending a final decision of the Circuit Court of Appeals. This company will continue to manufacture, having executed a bond of fifty thousand dollars to cover any damages from infringements. The outcome of the appeal is looked forward to with interest, as it will probably terminate this long litigation.

It is believed that the Edison General Electric Company will pursue an impartial policy toward the "vanquished," as these companies have invested large amounts of capital and have such extensive interests in the manufacture of incandescent lamps. But the question of the patent rights of Mr. Edison is beyond cavil.

N. Y. TAX REFORM PLATFORM.

The advance sheet of the New York Tax Reform Association Platform, sent out by a body of prominent citizens engaged in various professions and avocations in this city, and united in the purpose of finding a correct solution of the vexed problem of taxation, has been received at this office. The effort to elicit the opinions of thoughtful persons and of the press in general will meet with universal approval, since agitation, inquiry and discussion among a free people, who carry on their shoulders responsibilities such as no country within the vast range of historical record ever assumed before, must evoke research, comparison and a thorough sifting of a subject vitally important to our country at the present juncture of affairs.

None know better than these earnest members of this association what a burning issue this question now presents to Americans; and when their minds revert to the momentous crises in human history with which it is linked, their wisdom in calling out a large expression of public opinion with regard to it is only a further proof of their

ability to deal with it. Disagreement on the subject of taxation cost a monarch his throne, and ultimately his head; it cost a Presidential candidate his election in our day; and the endeavors of a succession of sages through past ages, as well as of the wise founders of this Republic, were brought into exercise to arrive at just conclusions in imposing its burdens and regulating its operations.

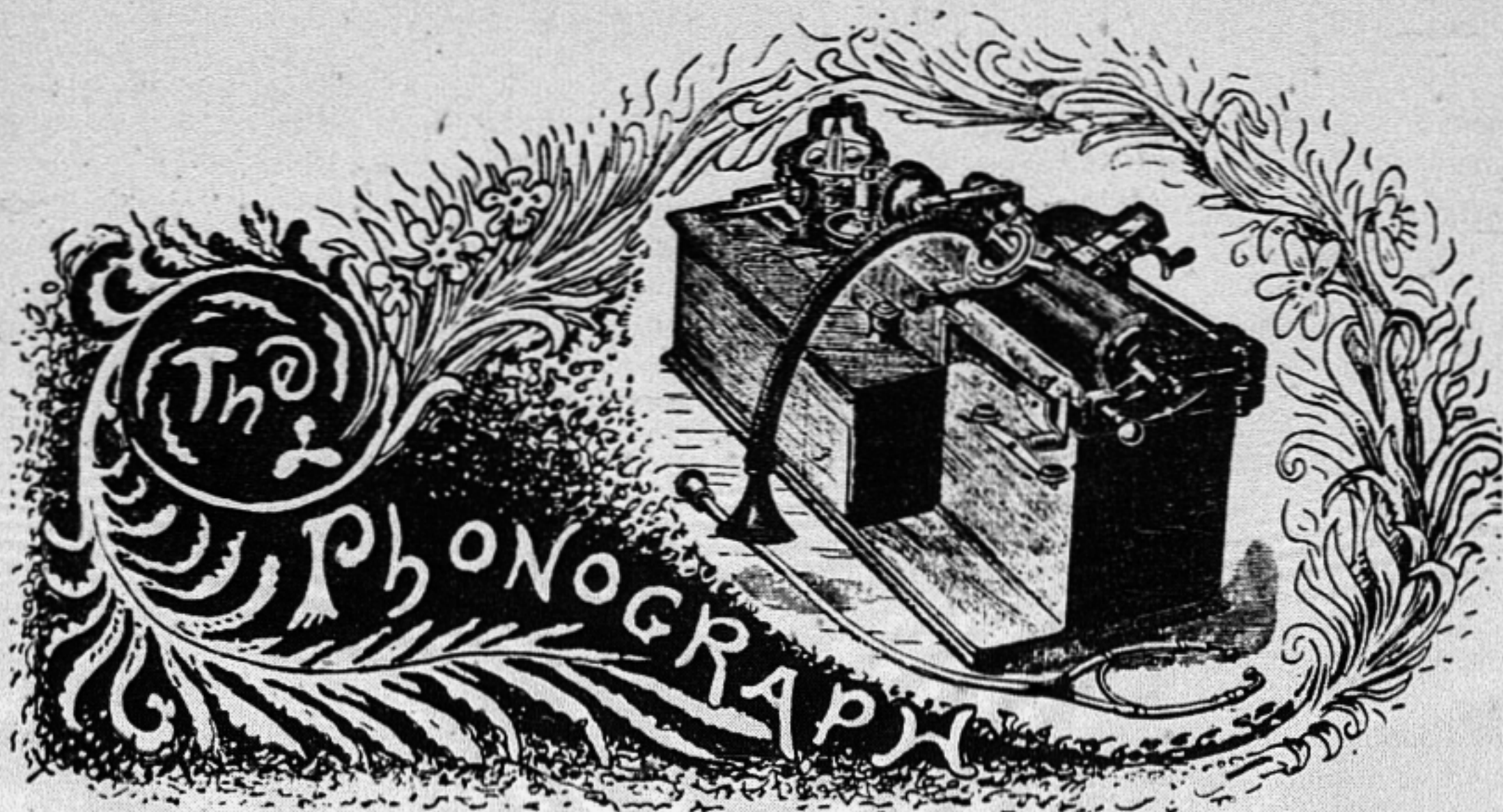
THE PHONOGRAPH ABROAD.

The North American Phonograph Company have concluded arrangements for the introduction of the phonograph into Canada. Mr. T. R. Lombard went to Ottawa a few days ago and appointed the Messrs. Holland Brothers, Senate reporters, agents for the company in Canada. We take the following from *The Empire*, of Toronto:

"Holland Brothers, the Senate *Hansard* reporters, have been appointed general agents for Canada for the Edison Phonograph, and are about to establish agencies throughout the provinces for the sale of these machines. Mr. T. R. Lombard, Vice-President of the North American Phonograph Company, came to Ottawa last week with the result above mentioned. The voluminous correspondence now in the hands of the company from all parts of Canada has been transferred to Messrs. Holland Brothers. Three classes of machines will be put on the market at once: the phonograph, for business office purposes; the "social" machine, for furnishing orchestral music, recitations, readings, etc., for entertainments; and the dime-in-the-slot machine, for hotels, steamboats and exhibition purposes. Any one who knows the Hollands will have no doubt that the business will be pushed with all the energy, skill, and resource that have made the brothers famous in other branches of trade."

EMILE REYNIER'S ELASTIC ACCUMULATOR.

Special attention is called to the advertisement of the ELASTIC ACCUMULATOR, invented by Mr. Emile Reynier, of Paris, France, in this issue of THE PHONOGRAM, the patent rights of which are for sale in this country. Mr. Reynier died very suddenly in January last, just as he had completed some improvements on this his latest invention. A full account of this battery and its superiority over the accumulators now in use is given in the February issue of THE PHONOGRAM, copies of which can be procured at the publication office.



LABOR-SAVING MACHINE FOR THE LAWYER'S OFFICE.

BY SEYMOUR D. THOMPSON, St. Louis.

Editor *American Law Review*.

We hope that our readers will not get an idea that this paragraph is a paid advertisement. One of the editors of this *Review* has had in his office for nearly a year a machine called the phonograph, invented and perfected, as is well known, by the Wizard of Menlo Park, Mr. Edison; and during a part of that time he has had in constant use two of these useful and labor-saving machines. Many of the "Editorial Notes," "Notes of Recent Decisions," and "Book Reviews" which have appeared in several past numbers of this magazine, have been dictated on one of those machines, and afterward transcribed by a type-writer of no more than ordinary skill and capacity. Prior to calling in the aid of the phonograph, the writer of these paragraphs had for many years done all his literary work and correspondence by the aid of stenographers. He is now able to say that Edison's phonograph *equals in accuracy any stenographer that has ever put pencil to paper*, provided the person who uses the machine delivers his record accurately to the cylinder, that is to say, dictates clearly and distinctly.

But it would be difficult, notwithstanding this, to balance the relative advantages or disadvantages of the stenographer and the phonograph. The phonograph is not subject to the ordinary infirmities of human flesh. It does not get sick, or get intoxicated, or go a-fishing or otherwise disappear and disappoint you when you want it most. It is always there, and generally ready for use. Nor does it tire out. If you are in an emergency and under pressure it will work as long as you can, and without grumbling. But it is a delicate instrument, and sometimes it gets out of order, and you have to wait (unless you have two of them) until you can telephone to the main office and they can send a young man out to make the necessary repairs. This does not often happen, but when it does happen it affords annoyance. To avoid this, one who has a considerable amount of work to be done should have two of the machines in his office or library. This statement shows that the phonograph can not be successfully used at a place remote from the main office, except by one who is sufficiently expert to keep it in re-

pair. A man who has always been in the habit of writing everything out with his own fingers, who has spent half of his life in making saw-teeth on paper, does not readily take to the use of a stenographer, and especially at an advanced period of life. So, a man who once gets used to dictating to a stenographer does not readily change to a phonograph, especially if he is an old man and if his habits have become a little fixed. But when he has once changed and inured himself to the change he will find that it is just as natural to him to think and talk to the little revolving cylinder as to think and talk across the table to the intelligent and bright-eyed stenographer. He will learn that some points are necessary to be attended to in dictating to the stenographer. The phonograph does not take

distinctly the two letters *f* and *s*, and it sometimes confuses *p* and *b*, and *k* and *g* with each other. All these things may be

overcome by careful and distinct dictation.

In dictating names, unless they are ordinary names, like Smith, Johnson, etc., the "dictator" should spell them out carefully. A lawyer, in dictating a brief, should never omit to spell out carefully the names of the cases he cites. The cost of each machine, with battery, cylinders and outfit, will foot up to about a hundred dollars a year. On the whole, we feel that we are doing our readers a service to commend



SEYMOUR D. THOMPSON.

to them this useful machine; and we add that we make the Missouri Phonograph Company no charge for this notice, although it is, like ourselves, a corporation, and (what we are not) "bloated."

THE PRINCE OF WALES AS A SCIENTIST.

The following letter was written to Mrs. Faraday by the Prince of Wales, after the death of her distinguished husband:

"DEAR MRS. FARADAY:

"Although I have not the pleasure of knowing you, I can not resist sending you a few lines to tell you how deeply grieved and distressed I am to hear of the death of your husband, Professor Faraday. Having had the great pleasure of

knowing him for some years and having heard his interesting lectures when quite a boy, I can fully appreciate how great the loss must be, not only to you, but to the whole country at large, where his name was deeply venerated by all classes. His name will not only be remembered as a great and distinguished scientific man, but also as a good man, whose excellent and amiable qualities were so universally known. Pardon my trespassing so soon on your great grief, and believe me, dear Mrs. Faraday,

"Yours sincerely,

"ALBERT EDWARD."

THE MOST PROFITABLE PHONOGRAPH.



THE Louisiana Phonograph Company claim the most profitable phonograph in the country. On March 7th, 1891, that company placed Phonograph No. 8,804, with nickel-in-the-slot attachment, in Eugene May's drug store, corner of Canal and Chartres streets, in the city of New Orleans. This was the first machine placed, and the location was all that could be desired, being a fashionable drug store, with a magnificent and largely patronized soda fountain. The phonograph took from the start and kept its custom, as is shown by the following record:

Receipts to April 8th, one month, \$518.85; to May 8th, two months, \$1,017.85; to June 8th, three months, \$1,420.80.

During all this time the phonograph and attachment ran with remarkable steadiness, and did not lose a day, nor did either of them have to be taken out or changed. The receipts were exceedingly uniform, ranging from \$14 to \$20. The biggest run was on March 21st, when \$21.45 were taken in, and on April 11th and 12th, when the receipts for the two days were \$40.85. The least return during the whole time was one bad day, when the receipts fell to \$8.90. Since then five other phonographs have been placed within two blocks from this location, and its re-

ceipts have fallen off to about \$250 a month.

The company have also had good returns from a battery of eighteen phonographs and attachments placed at the great place of evening resort for New Orleans, the West End Lake Front. Each cabinet in this arrangement has a small incandescent lamp, placed inside just above the phonograph, which adds greatly to the attractiveness of the exhibition. To burn these lights takes four of the ordinary Anglo-American batteries, the same as are used to run the phonograph.

The Louisiana Company puts out but a limited number of nickel machines, but puts them only in the best places, and never pays any percentage. The favor has been the other way, and, unless the place was very desirable, they have charged the proprietor for putting the outfit on his premises. Only the best music is used, and unusual care is taken to watch it and to remove it before it shows the signs of wear. The attachment used is the Hartford Model, a purely automatic machine, which fact has in no small degree contributed to the success achieved.

The company have not a sufficient supply of phonographs to do much at placing business machines as yet. They have out a limited number in good places where the parties can familiarize themselves with its workings as practical examples for others. Later, when the cotton season opens, it is probable from the applications already filed, that they will have as much of this sort of custom as they can attend to properly.



THE AUTOMATIC PHONOGRAPH IN ST. LOUIS.

A NEW INDUSTRY YET IN ITS INFANCY.

The nickel-in-the slot phonograph, while no longer a novelty in St. Louis, shows no decrease in public favor. The machines are controlled by the North American Phonograph Company, who own the Edison patents.

Mr. J. C. Wood, the general manager of the Missouri Phonograph Company, controls the Indiana and Missouri territory, the Arkansas territory being leased to the Arkansas Edison Phonograph Company, with head-quarters at Little Rock, where Mr. H. G. Allis, President; Mr. N. Kupperle, Vice-President, and Mr. W. G. Brown, Secretary and Treasurer, are ably pushing the phonograph business.

The cylinders upon which the sound is impressed are made of wax. The securing of musical selections has grown to be quite an industry. It is done mainly by the Columbia Phonograph Company, of Washington, D. C., the New Jersey Phonograph Company, of Newark, N. J., the New York Phonograph Company and the Ohio Phonograph Company. The Columbia Phonograph Company places from three to five hundred cylinders on the market each day. Their specialty is music by the world-renowned United States Marine Band, which plays at the White House.

The next most popular band is Issler's, of Newark, N. J. The "Gondolier's Lancers" has the greatest success for phonographic dance-music.

Cappa's 7th Regiment Band and Gilmore's, of New York, are world renowned; they captivate the ear and senses by their magnificent melody.

Mr. Wood, the general manager, says that from a monetary point of view the automatic phonograph is a great success. They have placed from fifty to one hundred machines in the large saloons and

restaurants. It is surprising how well patronized they are. There is one machine on Broadway that nets one hundred dollars a week, while some on Olive Street net from fifty to one hundred dollars. Occasionally worthless coins are placed in the slot, but the percentage of loss by such deception is not near as great as the risks taken in other businesses.

The nickel-in-the-slot machine has kept steady growth with the other improvements, and it is almost impossible to succeed in operating them without placing the necessary nickel in the slot.

Two men attend to the fifty machines each day, visiting them twice during the twenty-four hours.

New airs are placed on the machines each day, unless by request a popular air is retained longer. Each cylinder can be used about fifty-five hundred times before its value is destroyed. Strange to say, in the saloons the most popular are vocal church hymns. The greatest success financially is the hymn "Nearer, my God, to Thee." Mr. Wood says he placed it in one saloon as an experiment; when the man went around the next day to change it, the proprietor asked to have it left, and it was still in demand at the end of the week.

Mr. McMillan, President of the Missouri Car Company, has one at his house, simply for entertainment. Mr. F. C. Bradford has one in his parlor. Mr. William Speed Stephens, the Booneville banker, has had a phonograph for several years, using it for business and entertainment.

The most peculiar use to which the phonograph has been put is that of the Washington professor of languages, who speaks his lessons to the phonograph and sends them to his class in order to teach the proper pronunciation.

THE SPOKANE PHONOGRAPH COMPANY.

SPOKANE FALLS, WASHINGTON.

The Spokane Phonograph Company was originally organized in the early part of 1889 by Messrs. W. S. Norman, H. L. Cutter, and C. B. Hopkins. Articles of incorporation were filed, the stock was being paid up, and the new company had just received a supply of phonographs and their necessary paraphernalia to start operations on a good scale, when the great fire of August, 1889, came along and consumed the city and the entire supply of phonographs and disorganized the company.

The organizers of the company after the fire were so busy in straightening out their own dilapidated affairs that the business of the phonograph company was not prosecuted to any great extent beyond the shipment to the company of a few machines; and it was not until August, 1890, when Mr. J.

W. Wilson came to take charge of the company, that things began to assume a more definite shape and the possibilities of the business became apparent.

Mr. Wilson was sent out to Spokane by the North American Phonograph Company, of New York, as expert and manager for the Spokane Company. Mr. Wilson was born in Ohio, in 1861, and is now,

therefore, thirty years of age. Up till 1889 he was engaged in commercial pursuits, and for several years was principal partner in a large and flourishing soap business in Cincinnati. As an amateur he had always taken a great interest in electrical matters, and when the phonograph was brought out it found in him an enthusiastic admirer.

In the fall of 1890 he followed Horace Greeley's advice and moved westward with the commission of the North American Phonograph Company in his pocket. When he came to Spokane there were several difficulties to be overcome. In the first place, he found the original company entirely disorganized, and the promoters engrossed with other important business pursuits. The company was also considerably in debt to the parent company. He found



W. S. NORMAN.

four machines in the Spokane office, and his first work was to get them into good working order to start a basis of income for the company. These machines were placed in the most popular resorts in the city and run by storage cells, and kept supplied with the best music that could be obtained from the East. They at once began to earn a steady income, and in the course of two

months the company was able to start clearing off its obligations. More machines were then ordered from New York, and Mr. Wilson made a trip through the Spokane territory, visiting the principal towns in that section with the view of placing machines. He then placed machines in the mining towns of Cœur d'Alene, Wallace, and Wardner, in Idaho, and shortly thereafter in Moscow, Walla Walla, Dayton, Pomeroy, and Colfax. The care of these machines was placed in the hands of responsible agents, and they at once began to make good returns. A large item of expense in the operation of these country machines was the freight on the storage cells between the towns and Spokane, as when the current was used up they had to be returned to be recharged and new ones had to be sent out. This expense is now, however, avoided, as

with each storage cell sent out he sends a battery of four Gethins voltaic cells, which keeps the storage cell charged up for a period of at least six months. Another trouble and source of considerable annoyance to the company was the persistent and pernicious practice of slugging the machines, very frequently the receipts of a machine being found to consist of twenty-five and thirty per cent. of slugs, and continually stopping up the machine, thereby preventing patrons of the machine from using it.

This trouble, however, Mr. Wilson has now successfully overcome by the use of a patent slug ejector, of which he is himself a joint inventor; and since its adoption by the company he has not met with a single slug in any of his machines. Mr. Wilson has also invented a register to record the number of nickels which may pass through the machine. This device registers up to one thousand dollars, and is absolutely perfect and reliable.

This register fills a long-felt want, as it enables the company to operate its machines in the country much cheaper than heretofore. Mr. Wilson also makes all the automatic slots used by the company on an entirely original design of his own, and has now no trouble with this important piece of the apparatus.

For the last few months, owing to the dullness of all kinds of business throughout the West, the receipts



J. W. WILSON.

from the machines are not quite so large as might be expected, or so large as in the first few months of the company's career; but the company is now entirely out of debt, and hopes to be on a dividend-paying basis in the course of a few months.

So far the commercial use of the phonograph in this state has not developed to any considerable extent. There are now two machines in commercial use, and Mr. Wilson contemplates placing a few more very shortly. The inhabitants of Spokane are not backward in adopting every prac-

tical advance in science, and Mr. Wilson thinks it will not be long before the business men will recognize the necessity of the phonograph as an indispensable article of the office.

The officers of the company are, F. Rockwood Moore, President; H. L. Cutter, Treasurer, and W. S. Norman, who is already well known in electrical circles, Secretary; and Mr. J. W. Wilson, Manager.

The offices of the company overlook the main street of the city, and consist of a handsome suite of rooms in the Hazel Block, with work-shop and tool equipment for making small machinery. Mr. Wilson also takes some fine pieces of music from the Auditorium Orchestra of the city, and occasionally from the operatic stars when they come around; and it is his constant endeavor to keep the best quality of music it is possible to obtain on his machines.

THE AUTOMATIC PHONOGRAPH.

From the progressive city of Galveston, Texas, two pretty souvenir photographs reached the head-quarters of THE PHONOGRAM this week. They afford evidence both of the prosperous condition of the phonograph company whose work they illustrate and of the refined taste and liberality of its management, while the execution of the cards demonstrates a high degree of excellence in the popular art to which the able artist has devoted himself.

In the first picture a little maiden awaits in eager expectancy the effect of her bestowal of a coin on the mechanical musician; in the second, her arch, gratified smile evinces satisfaction at the result of the investment, and pleasure in the sort of enjoyment afforded by the machine.

Her graceful little figure reclining in a large arm-chair, with one pretty arm resting on the instrument, and the hand of its fellow sustaining the tubes through which she catches the silvery strains of the phonograph, makes what painters would call "a good example of animated and still life" combined.

A RECORD BY GOV. NORTHEN, OF GEORGIA.

Whenever I look at a railroad train passing by, I am always impressed with the very great power of inventive genius; as I speak through a telephone I feel that I am almost in communication with God himself, because of the peculiar impression produced upon my mind when spoken to by somebody unseen, a great distance away.

When I hear this machine it is the machine that is a wonder, and I am more strongly impressed with the power of man and his inventive genius, in listening to the phonograph, than anything I ever heard in my life.

AN ADDRESS BY THE PHONOGRAPH.

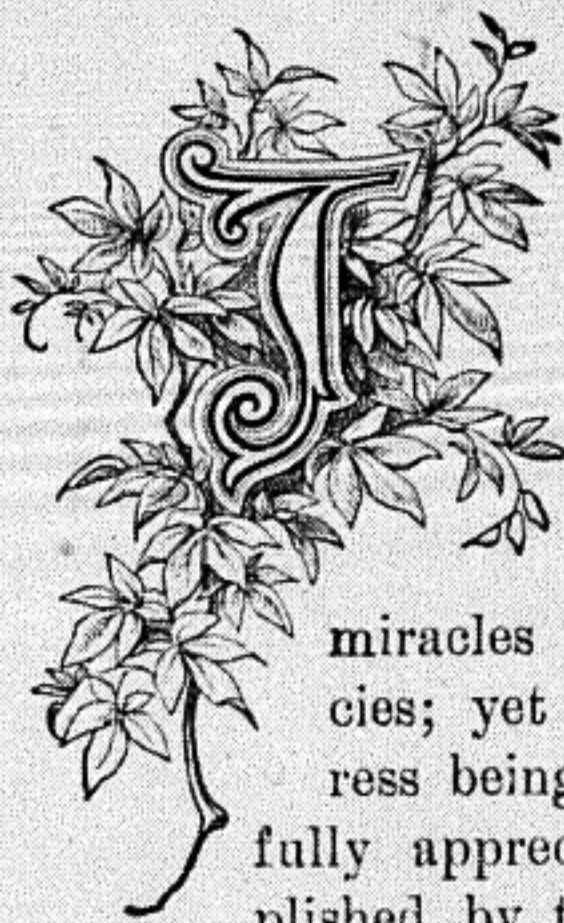
Children's Day at the Trinity Methodist Episcopal Church, Denver, Col., was a great success.

The feature of the occasion was the address by H. A. Buchtell, D. D., the former pastor of the church. The speech was delivered through the medium of the phonograph. It was with fond anticipation mixed with anxious curiosity that the audience watched Professor O. D. Miller as he wound up the wonder of the nineteenth century. When the phonograph was primed the stillness of death pervaded the assembly. A few moments of painful silence, and a sound emanated from the throat of the trumpet; it was that of a human voice—of Dr. Buchtell's. The inflection of the tones were the doctor's in miniature, but exceedingly life-like. The closing accent of the word "dollars" brought a life-size portrait of Dr. Buchtell in plain sight. The tones were distinctly audible in every part of the vast room.

Following the phonograph address made by the doctor came remarks on the part of Mrs. Buchtell to her former Sunday-school class. The lady's voice was distinct and audible even in the gallery. The audience in general was greatly interested in the feats performed by the phonograph.

A MODERN TALKING MACHINE.

BY EDWARD D. EASTON.



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IN this age of startling inventions, intelligent men are almost willing to admit the possibility of performing miracles by mechanical agencies; yet great as is the progress being made, it is hard to fully appreciate what is accomplished by the Edison Perfected Phonograph and the Graphophone. Now, literally, you hear the dead speak. While sleeping quietly in Washington, you may be addressing audiences at an indefinite number of points throughout the United States, or, indeed, the world.

What the modern "talking machine" does, in brief, is to accurately record and reproduce all sounds. It is, so to speak, a photographer of sound. All sounds made near the recorder while the machine is in motion are seized and permanently copied, to be given forth at pleasure as often as desired.

Already the phonograph is reaching into business fields. It is taking, in the office, the place of the short-hand and the long-hand amanuensis. Business men dictate to it daily their letters, memoranda, instructions to employees, etc. Letters, both social and business, are made by talking, putting a stamp on the talk, and mailing it to your correspondent, who receives voice instead of handwriting.

The whole world of music is brought into the home, where previously nothing but a single musical instrument, possibly none, was available. To-day the music of the celebrated United States Marine Band, hitherto reserved for the President, high officials, and such as were favored in Wash-

ington and adjacent territory, is heard in thousands of homes from Maine to Texas and California, although neither music nor musical instruments are present.

To-day the work of the most eminent vocal and instrumental soloists, previously enjoyed by the small part of the public with whom they came immediately in contact, is spread throughout the length and breadth of the land for the benefit of all.

The blind, who have had to content themselves with raised letters, or with such opportunities for communication as arose from the presence of their friends, can now, through the mails, communicate and receive communications freely.

For a considerable time after the phonograph was invented it was only accessible to those who were able to pay the annual rent, or who were so fortunate as to have acquaintances possessing instruments. Now public automatic machines are located in drug-stores, hotels, depots and other places where people gather. These machines are worked by merely dropping a five-cent piece in the slot. The records are changed every day, thus giving a programme of infinite variety within the reach of the masses. It is quite the fashion for ladies and gentlemen to go every evening to the nearest phonograph and hear the latest records; and all over the United States people may be found collected around the cabinets, each in turn placing the queer-looking ear-tubes to the ears and enjoying the performance.

In many offices, if you find absent the man you wish to see, you are politely requested to leave on the phonograph or graphophone the message to be given, and doing so, it is afterward, in your own voice, delivered.

At the Cyclorama of the Battle of Bull Run, in Washington, when the person

whose duty it was to deliver daily the lecture describing the scenes portrayed struck for higher wages, the manager made no complaint, but simply hired a phonograph, repeated the well-known lecture to it, and let the machine give it forth as often as desired.

Fashionable congregations need no longer deplore the summer absence of the pastor, who may be afflicted with what Bill Nye calls "Palestine Rash." It is only necessary that a sufficient number of sermons, new or old, be left upon phonograph cylinders; and when the Sabbath arrives the phonograph will throw forth to the congregation the sermon of the day. Dancing-schools need no longer regret the high cost of musicians. Indeed, they may give through the phonograph music of orchestras and bands that never could be brought personally within their reach, because of the great expense.

Students of foreign languages now have, on phonograph or graphophone cylinders, examples of exact pronunciation; and by repeating over and over again from the phonograph the words desired, the accent should become so fixed in the memory as to remain.

Lovers need no longer depend upon cold and lifeless letters for communication when separated, but breathe into the machine with all the fire and passion of speech itself the thoughts that surge within them, well knowing the effect upon the ear of the dear one will in this way never be lost.

While De Wolf Hopper was in Washington recently his best songs, sung by himself, were on public phonographs at half a dozen points in the city. These songs still remain, and are repeated hourly in Hopper's own voice, while he who sang the original is far away.

The songs of Patti and the cornet solos of Levy are now accessible to the whole world through the phonograph. What more can music-lovers wish?

Who has not at some period during his

life tried to learn short-hand? And who does not know how difficult the task and how uncertain success under the most favorable circumstances? The phonograph and graphophone do certainly and without effort better work than the oldest and most skillful short-hand reporter can ever hope to do; in fact, the work does itself. You have only to talk, and your talk at once becomes a record.

CLASS DAY AT THE WESTERN UNIVERSITY AND THE EXERCISES HELD.

The exercises on Class Day at the Western University were slightly out of the usual run. John D. Scott, president of the class, delivered a meritorious address. Bert E. V. Luty selected "Class History" as his subject. The class poem was written and read by William A. Johnston. The other performers were Harry M. Davidson and James W. Hays.

The most pleasing feature of the day was the spoon presentation and the juniors' reply. The class relic was delivered to the class by Daniel H. Wallace. At the conclusion of his remarks a skeleton carrying a phonograph concealed under its cloak appeared, and from the phonograph emanated a speech of ridicule and humiliation from the junior class. Walter Riddle replied on behalf of the class of '92, and presented each member of the graduating class with a souvenir, the significance of which was fully understood by the recipient. The programme was highly appreciated by the large audience gathered.

PEORIA, Ill., May 15th, 1891.

To the Editor of THE PHONOGRAM:

Q. Please state in your next issue what special quality of slate is the best for electrical purposes?
Yours, etc., D. W. H.

A. The best slate in question comes from Vermont, and, we believe, a small section of Tennessee. The Vermont slate is among the best-known insulators, and is used for switch-boards and many other electrical purposes. It is fibrous and tenacious in its nature. Probably some of our readers can give more particulars.

NOVEL AND ORIGINAL PLAN OF DOING BUSINESS

WITH WOULD-BE CANVASSERS BY A PHONOGRAPH.

Butler's publishers are overrun with people who want to canvass for his book, and the firm has adopted a novel and original way of doing business with them. Book agents are all great talkers—they have to be—and most of them, especially those of the gentler sex, drive the busy publisher almost distracted when they make application for a contract. Yet this new plan of the Butler people is so ingenious that the most case-hardened agent goes through the mill in silent astonishment and signs his application without a yip.

The pretty blonde clerk who sits next the door tells the whole story:

"Why, it's like this: A man opens the door and he sees me, and he says: 'Do you publish the Butler book here?' And I say: 'Yes, sir; do you wish to apply for an agency?' Oh, I can tell an agent every time. And then he says: 'Well, I'd like to talk with some man in charge about it.' Then I say: 'Sit right down here, please. There is a prospectus, there is a territory book, there are the circulars, and there is an application blank. Now just let me hook this in your ears, and the head of the firm will talk to you.'

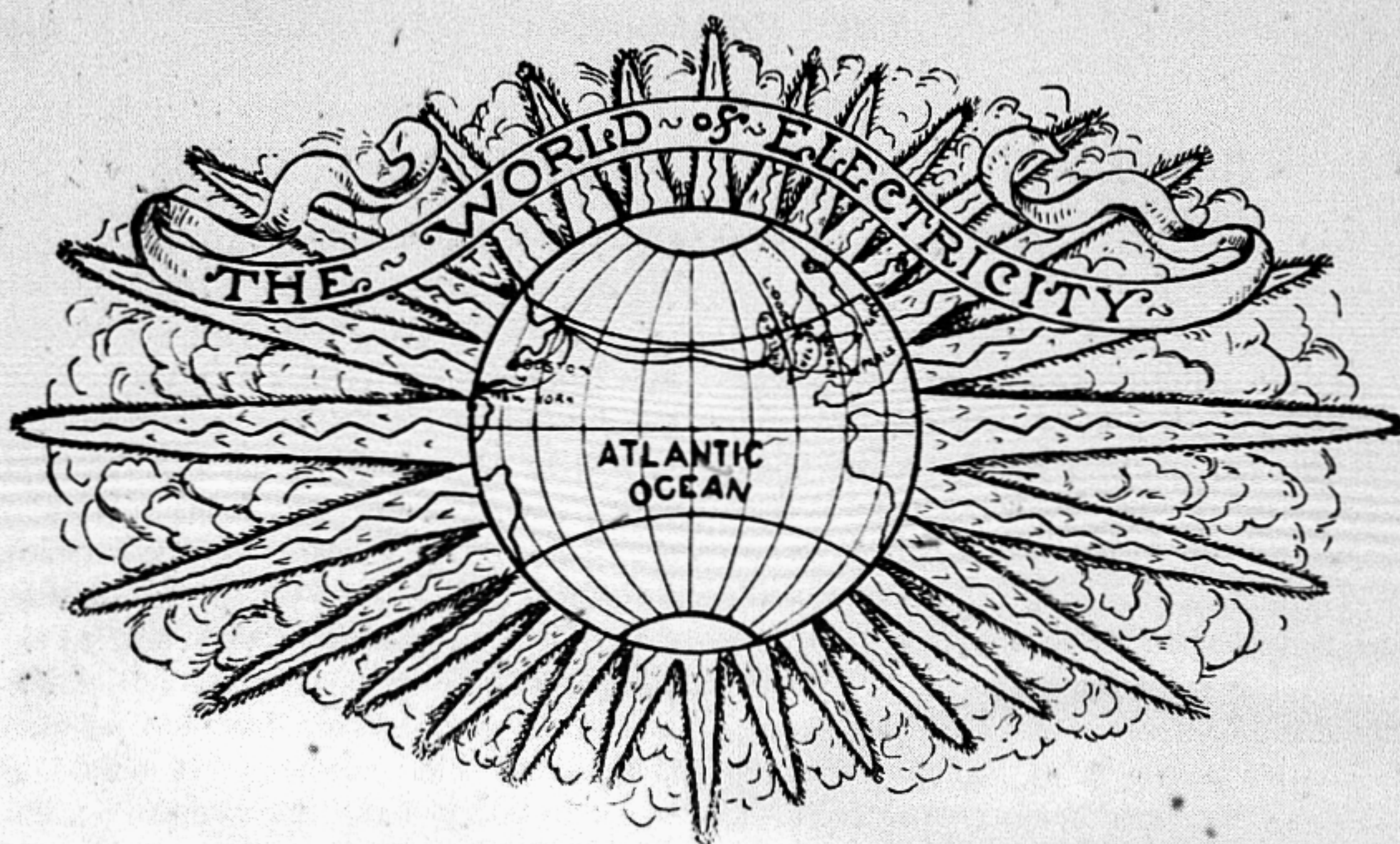
"You see, it's an Edison phonograph he sits down to, and before he fairly knows where he is, zip, zim, quackety quack, the machine begins to talk to him.

"It starts in, 'How do you do? Glad to meet you. You wish to canvass for the Butler book?' And then the agent always nods his head to the machine as if it were a live being. Then the phonograph goes on to tell how very busy the publishers are, and that they feel sure he will appreciate

this labor-saving device which they use in talking to him.

"Then he is told, 'Take a circular which lies at your right hand. Look it over carefully, and please stop the machine while you do it.' So with the prospectus, etc. Then the machine asks him to examine the territory book at his left, where he can see what sections have not yet been assigned to other agents. It tells him where to find pen and ink to make out his application, and to pay 'the young lady who first waited on you'—that's me—two dollars for a prospectus. Finally the machine says, 'Now, if there is any point on which it is absolutely necessary that you have further information, the young lady will conduct you to one of the firm. But remember, you must be brief, for their time is valuable.' And then the agent nods again, where he would get mad and go out if he had been talked to so face to face. But he can't get mad at a machine. Then the phonograph says, 'Good-day,' loud and sharp, and the agent hands me his application and his two dollars, meek as Moses, and goes out.

"Oh, it works first rate. Not one agent out of ten asks any questions or wants to see one of the firm when he gets up from the phonograph. An agent named O'Neil, from South Boston, was one of the first to try it, and he was so carried away with it that he rushed across the street to the State House and brought over First Clerk Edgett to try it. Mr. Edgett went through the turn, and said he was almost persuaded to go canvassing for the Butler book himself."



THE NATURE OF ELECTRICITY.

BY ALEXANDER JAY WURTS.

“Electric current” and “electric fluid” are convenient terms used to express a certain condition of matter, but their use is misleading, in that they imply a flowing motion of some material thing. They are expressions which, in the early days of electricity, appealed readily to the imagination, and were consequently adopted by common consent. They are now used because they are in use, and because they express what seems to take place. They are used for the same reason that the “setting sun” is used.

An electric current has direction without any flow or transmission of matter. To illustrate: Imagine a horizontal brass rod with a lamp under one end. First, the rod becomes hot directly over the lamp, then further and further away, and we say that the heat “creeps” over the rod. If the rod had been previously coated with wax, the wax would gradually melt from one end toward the other. In this illustration the heat is guided by the conducting prop-

erties of the rod, and it therefore had a direction along its length; but there is no transmission of matter—no flow of a tangible substance. In other words, heat is not a material thing. It is a kind of motion—a motion of molecules or body particles—and being a motion, it is a form of energy. When this energy is transmitted from one place to another we notice the direction, and say that it “flows.” Electricity is also a form of energy, and when this form of energy is transmitted over a wire there is direction without transmission of matter.

The latest researches indicate that heat is a motion of the particles of which matter is supposed to be constructed. It must not be understood here that heat causes this motion, or that the motion causes the heat. It is the motion itself that has been given the name of heat. It is heat motion. Expansion due to heat is then explained in this way. A pendulum vibrating with a given amplitude may be said to correspond to a given temperature. If the tempera-

ture is increased, the motion—that is, the amplitude of vibration—will be correspondingly increased, and consequently more room (expansion) will be required for this increased motion. If we imagine a mass of marbles, each marble moving and vibrating with respect to the mass, and never touching its neighbor, much as the heavenly bodies move and vibrate with respect to the universe, and then imagine further that by some outside influence those marbles are caused to move more rapidly, that is, with an increased amplitude of vibration, it will be easy to understand that they must have more room—"elbow room," so to speak. In steam we have an excellent example of expansion due to heat, in that the molecules are by their own motion driven so far apart that their mass becomes invisible. If we could magnify the molecules to such an extent as to make them visible, steam would look something like the universe with its worlds and interplanetary spaces.

Heat motion is transmitted from one particle to another by the influence of such particles on each other. If we stand a number of blocks on end and in a zigzag direction across the floor, in such a way that when the end block is tipped over it will cause all the others to fall in succession, it will be easy to understand how that motion, that is energy, can be transmitted and guided in its direction by the effect of one particle on another without actual transmission of matter. The connecting link between the above remarks and electricity is this: Heat is one form of molecular energy and electricity is another. Energy, in its broadest sense, is a condition of matter having the power to do work. A moving train, a lifted weight, gunpow-

der, compressed air, etc., etc., are all forms of energy. Energy is a universal characteristic of matter. Its natural form is that of vibratory motion without transmission of matter. If we start a pendulum vibrating, it will tend to vibrate forever, but friction forces it to come to rest. If we could drop a stone through the center of the earth, the stone would vibrate back and forth forever, were it not for friction. The heavenly bodies, meeting with no friction and having been once set in motion, move forever. It is their natural state, and their motion is vibratory

WORLD'S FAIR NOTES.

Twenty-four foreign nations have officially accepted the invitation to participate in the Exposition. Two million six hundred and ninety-five thousand dollars have been appropriated by twenty-nine States for their representation at the World's Fair

It is estimated that the cost of the Illinois State Building will probably be four hundred thousand dollars, though a reduction of two hundred and fifty thousand has been talked of, and in this event the plans of the structure will have to be modified, and a less imposing building be constructed.

Texas has decided to set apart a spacious room in its Exposition building for an exhibit by the colored people of the State.

The New Orleans Machinery Company write that they will make a complete exhibit of cotton-gins, sugar-mills, and other machinery at the Exposition.

The Kent Electric Writing Machine Company, capital stock \$500,000, has been organized at St. Paul Park, Minn.

The Electric Light Convention begins in Montreal, September 7th.





THE COSMICAL TELEPHONE.

Hardly have we recovered from the astonishment elicited by the explanation of Mr. Edison's marvelous kinetograph, where we find thirty-two thousand eight hundred photographs taken ever half hour, so that the full representation of a theatrical performance or any other public event can be instantly recorded at a considerable distance from the scene of action, before we are again called upon to have another wondrous marvel invented by the Electrical Wizard.

Mr. Edison owns a mine in Ogden, N. J., which consists of almost a solid body of iron, a mile long, five hundred feet wide, and extending into the earth to an unknown depth. Some years ago, when the long-distance telephone with a metallic circuit was being experimented with, Mr. Edison had control of a long line, and he says he frequently heard strange sounds in the telephone which he attributes to solar eruptions, and when experimenting at the mine with his metallic needle, he found sudden and appreciable disturbances of the needle.

He has conceived the idea of surrounding the mine, says the *Scientific American*,

with a number of convolutions of wire, which terminate in a telephone receiver and in suitable recording apparatus. The immense body of iron forming the mine thus becomes the magnet of the telephone, and fifteen convolutions of wire mounted on telegraph poles surrounding the outcrop of this iron form the conductor of the telephone, and the terminals of this great coil extend to an observatory erected at one end of the mine.

Mr. Edison is looking for some important revelations when this work is finished. When questioned as to the feasibility of seeing by telegraph, and his experiments in that direction, he said he was doing absolutely nothing toward solving that problem. He considered it hardly worthy of attention, but he stated that phonographic pictures could be sent telegraphically as readily as handwriting or diagrams; that he had accomplished this by means of an ordinary photographic negative used in the electrochemical telegraph, and also by means of a common photograph used in the electric motorgraph. Well, a telephone that will repeat the noises heard in the sun will be an astonisher!

THE ASSOCIATION OF EDISON ILLUMINATING COMPANIES.

The next meeting of the Association of Edison Illuminating Companies will be held in New York City, beginning Tuesday, August 11th. The meeting will take place at the Murray Hill Hotel.

The programme for the convention will be substantially as follows:

FIRST DAY, *Tuesday*.—Opening address by the President; roll-call; election of officers for the ensuing year.

Report of Executive Committee and action by the Association regarding applications for membership.

Reports of Secretary and Treasurer.

Report of Committee on the Prevention of Damage from Crosses of High Tension Circuits, by C. P. Gilbert, of Detroit, Chairman.

Report of Committee on Lightning Protection, by A. E. Kennelly, of the Edison Laboratory, Chairman; and the results of experiments at the laboratory on new forms of lightning-arresters.

Report of Committee on Grounding the Neutral Wire in Three-wire Systems, by A. E. Kennelly, Chairman.

Report of Committee on Fuel Gas, by J. R. Markle, of Detroit, Chairman.

A visit to the office and stations of the Electric Illuminating Company, of New York, in response to an invitation from the company to inspect the special features of their three plants, and plans for the proposed comprehensive station near the City Hall.

SECOND DAY.—Addresses by officers of the Edison General Electric Company as to matters of commercial interest to the Association and the patent litigation.

Paper: "How to get a Paying Load for Stations," by William D. Marks, of Philadelphia.

Paper on the "Meters in use in the Station of the Brooklyn Company," by R. S. White.

Paper: "How can our Association best serve Central Station Interests?" by Frederic Nicholls, of Toronto.

Paper by W. L. Garrison, of the Brockton (Mass.) Company. Subject to be announced.

Paper on "Important Details in Underground Conductors," by Mr. Stevenson, of the New York Illuminating Company.

Paper: "Some Practical Ideas on Distribution," by Leigh Carroll, of Birmingham, Ala.

Paper by C. L. Edgar, of Boston. Subject to be announced.

Paper: "Peculiar Features of the Edison Feeder System," by Nelson S. Howell.

"The Success of the Mutual Insurance Idea in Electric Light and Power Stations," by the Secretary.

Paper by H. J. Smith, of the New York Illuminating Company. Subject to be announced.

Visit to the station of the Edison Electric Illuminating Company, of Brooklyn, in response to an invitation by the officers of that company.

THIRD DAY.—Visit to the Schenectady Works of the Edison General Electric Company.

The courtesies of the New York Electric Club have been extended to all members of the Association attending the convention.

The Edison Electric Illuminating Company, of New York, and the Edison Electric Illuminating Company, of Brooklyn, are all interested in the success of this convention, and will extend delegates all the privileges in their power.

The officers of the Association are: President, John I. Beggs, Chicago, Ill.; Vice-President, C. L. Edgar, Boston, Mass.; Secretary, W. J. Jenks, 44 Broad Street, New York City; Treasurer, Wilson S. Howell; Executive Committee, A. L. Smith, Appleton, Wis., Chairman; C. P. Gilbert, Detroit, Mich.; Thomas P. Merritt, Reading, Pa.; E. R. Weeks, Kansas City, Mo.; Leigh Carroll, Birmingham, Ala.; John I. Beggs (ex-officio), Chicago, Ill.



“SPEED.”



SO much has been heard from varied sources about speed-writing that the interested public has been surfeited with accounts of unnecessary contests for speed on the different type-writers. When a man buys a machine for general use, little does he care whether his operator can produce two hundred strokes a minute or five thousand. He wants a solid, practical writing machine for good all-around work. The repeated striking of two keys at a high speed does nothing toward convincing man, woman or child of the true capabilities of either operator or instrument. For the characters usually selected for such work are those whose operative points are far removed in the type-basket.

So it is to be hoped that this wild chase after phenomenal speed-records on minute spurts is over. In the first place, the public is not languishing for that class of literature, and those who best know the true inwardness of such records know too well

that the mass of readers is grossly deceived. It is a good advertising medium. But the day for such contests is over. A machine which, owing to its mechanical construction, is keenly responsive to the rapid manipulation of a good operator is good enough to satisfy the ordinary man of intelligence. A record of one hundred and thirty words—a few more or a few less—in half a minute never sold a machine, and *couldn't* raise the standard of speed to that excellence.

According all credit to the tireless practice which the acquiring of such speed represents, it is energy, force, nerve-power and mental strain utterly unappreciated in these days, when, if an operator can do a day's work at the rate of fifty words a minute from notes, *and do it well*, none but a selfish brute would fail to appreciate him or her.

Mr. Thomas Allen Reed, an earnest co-worker with Isaac Pitman, used to boast that he could write by pen faster than an operator could use a machine. His record was sixty-five words a minute. This minute's work was reproduced by lithography and copies scattered freely among interested people. But though this was a grand

pen-speed, it is right to say that the writing was not intelligible throughout; some of the words looked like wavy horizontal lines, varied here and there by a downward or upward effort of greater proportions.

But a few years ago Mr. Reed was completely won over to the type-writer as a weapon "mightier than the pen."

Within the last five years it was an evidence of English conservatism that the young women of the middle classes were brought up to believe that to act as "companion" or "governess" were the only two honorable and dignified callings for a "lady" to engage in.

Such a thing as a woman clerk in the law office, real estate office, insurance office, broker's office, or commission-house was never dreamed of. But, thanks to the march of progress, the daughters of some well-to-do English merchants and mechanics have begun to revolutionize custom by engaging as stenographers and operators on typewriting machines.

Nevertheless, criticism has not entirely passed away, because we have seen a letter from a young girl in London to her sister in Philadelphia, part of which reads: "So you are a clerk in a business office! Oh! sister, *couldn't* you have stayed teaching? Anyway, I should think you could have found a more lady-like way to earn your living."

If "a man is what a woman makes him," a woman is what she makes herself, and a woman can be a woman as much in the office or kitchen as in the parlor sitting on velvet chairs or in church guilds making little nothings for some charity fair.

ASHVILLE, N. C., July 24, 1891.

THE PHONOGRAM PUBLISHING COMPANY,
WORLD BLDG., NEW YORK CITY.

DEAR SIR:

Q. Will you please state which, in your opinion, is the best type-writer on the market at the present, and greatly oblige

Yours truly,

W. D. G.

Mr. Kendall, of Albia, Iowa, reported the proceedings of the Clayton-Breckenridge Investigating Committee, and in eighteen days took on the caligraph from dictation five hundred and fifty thousand words, or at the rate of fifty-one words per minute for eighteen days, counting ten hours as a day's work. At the conclusion of the work the alignment of the machine was perfect. The calligraph used was not a new instrument, but had been in use for a long time, says the *Stenographer*.

We especially commend to our readers the following article taken from the *New Orleans Times-Democrat*:

"Many of the young girls of to-day, forced to earn their own livelihood, are attempting to learn stenography as a means of employment. More than half of them begin the study without ever realizing the length of time and the amount of labor and talent necessary to render one proficient. No one can make a success of stenography who is not possessed of a practical common school education, with a complete knowledge of the rules of spelling and punctuation and of rhetorical construction. It is not only the ability to take down rapidly what is said that constitutes the stenographer, but it includes the ability to transcribe in faultless diction that which may have been dictated in hurried and disconnected style. If the merchants or the lawyers were to see their letters coming from the type-writer just as they have spoken them, they would be far from satisfied. Their thoughts rise so much quicker than their words that their expression is likely to be anything but euphonious. It is the duty of the stenographer to so arrange the composition as to correct all errors and to render it explicit. A good stenographer can command a high salary and always secure employment. Let any girl who thinks she can make a success of it study stenography with a will, but with a consciousness that no half-hearted study will suffice, but that earnest endeavor, unremitting application and untiring perseverance will win success."

ELECTRICAL PATENTS FOR JULY, 1891.

Reported for THE PHONOGRAM.

No. 455,447—Conduit for electric railways. William Bradley, Fort Wayne, Ind.

No. 455,726—Electric motor or generator. Walter F. Brown, St. Paul, Minn.

No. 455,680—Electric belt. Charles A. Bogardus, Syracuse, N. Y.

No. 455,306—Annunciator. Manias Garl, Canton, Ohio.

No. 455,711—Electric motor. Paterson Electrical Manufacturing Company, New Jersey.

No. 455,545—Electrical walking toy. John B. Kibler, Minneapolis, Minn.

No. 455,339—Conductor for electric railways. Walter H. Knight, Cleveland, Ohio.

No. 455,340—Electric railway. Walter H. Knight, New York, N. Y.

No. 455,341—Electric railway. Walter H. Knight, New York, N. Y.

No. 455,342—Electric railway. Walter H. Knight, New York, N. Y.

No. 455,343—Electric railway plow. Walter H. Knight, New York, N. Y.

No. 455,451—Diaphragm for electrolytic cells. Ernest A. Le Sueur, Ottawa, Canada.

No. 455,631—Apparatus for the defecation of saccharine juices by electricity in the manufacture of sugar. Elias Maigrot and J. Sabates, Havana, Cuba.

No. 455,488—Friction gearing for dynamos. Frederick L. McGahan, Indianapolis, Ind.

No. 455,575—Electric meter. Johan Olan, assigner of one half to E. H. Johnson, New York, N. Y.

No. 455,454—Electric railway. Edwin W. Rice, Jr., Lynn, Mass.

No. 455,517—Multipolar dynamo. Andrew L. Riker, New York, N. Y.

No. 455,581—Electric motor car truck. John F. Sieberling, Akron, Ohio.

No. 455,520—Pulsating current reciprocating

electric engine system. Charles J. Van Depoele, Lynn, Mass.

No. 455,524—Electric moter. James W. Wood, Brooklyn, N. Y.

ISSUED JULY 14, 1891.

No. 455,981—Apparatus for administering electricity. Bethel Electric Medical Baths Company, Limited, Melbourne, Victoria.

No. 455,898—Electric motor or dynamo electric machine. Charles G. Curtiss, New York, N. Y.

No. 455,789—Manufacturing insulated conductors. Charles Curtiss, New York, N. Y.

No. 455,837—Electric switch. Carl G. Dahlgren and J. H. Svensson, Gothenburg, Sweden.

No. 455,855—Electric indicator. Earl C. Eldredge, Springfield, Mass.

No. 455,790—Dynamo electric machine or motor. Justus B. Entz, New York, N. Y.

No. 455,815—Electro phonometer and phonoscope. New England Telephone and Telegraph Company, Boston, Mass.

No. 455,856—Holder for carbon brushes of commutators. Clarence H. Farrington, Milford, Mass.

No. 455,986—Terminal for electric batteries. American Bell Telephone Company, Boston, Mass.

No. 455,798—Trolley for electric cars. Walter H. Knight, Newton, Mass.

No. 455,968—Secondary battery plate. S. Miller, Philadelphia, Pa.

No. 456,120—Insulated electric conductor. Edwin D. McCracken, Alpine, N. J.

No. 455,904—Insulated electrical conductor. Norwich Insulated Wire Company, New York, N. Y.

No. 455,971—Armature for dynamos. Frederick L. McGahan, Indianapolis, Ind.

No. 455,765—Electric motor. Harry H. Porter, New York, N. Y.

No. 455,800—Electric cut-off apparatus. Thomson-Houston Electric Company of Conn.

No. 455,887—Armature for dynamo electric machines. Thomson-Houston Electric Company of Conn.

No. 455,953—Cut-out for arc lamps. Charles E. Scribner, Chicago, Ill.

No. 455,773—Alternating current motor. William Stanley, Jr., Pittsfield, Mass., and J. F. Kelly, New York, N. Y.

ISSUED JULY 21, 1891.

No. 456,540—Welding by electricity. John H. Bassler, Myerstown, Pa.

No. 456,376—Conduit for electric cables. Jacob Freres & Co., Paris, France.

No. 456,219—Electro therapeutic apparatus. E. Gramm, New York, N. Y.

No. 456,271—Flexible conduit for electric conductors. Charles H. Herrick, Winchester, Mass.

No. 456,513—Electric railway. Electric Car Company of America, Philadelphia, Pa.

No. 456,514—Electric railway. Electric Car Company of America, Philadelphia, Pa.

No. 456,250—Insulated contact for electric switches. Oeron S. Platt, Bridgeport, Conn.

No. 456,253—Operating mechanism for current regulators. Sidney H. Short, Cleveland, Ohio.

No. 456,254—Switch for electric car motors. Sidney H. Short, Cleveland, Ohio.

No. 456,252—Connector and support for trolley wires. Short Electric Railway Co., Cleveland, Ohio.

No. 456,327—Cut-out for electric lamps. United Gas Improvement Co., Philadelphia, Pa.

No. 456,172—Measuring electric currents. Thomson-Houston Electric Company of Conn.

No. 456,541—Method of and apparatus for electric welding. Lloyd S. Wiegand, Philadelphia, Pa.

No. 456,182—Electric lock. Abram S. Wiley, Detroit, Mich.

ISSUED JULY 28, 1891.

No. 456,611—Cable head for electric wires. Upton H. Balsley, Philadelphia, Pa.

No. 456,612—Electro-motive force regulator. Edward M. Bentley, Boston, Mass.

No. 456,718—Coin controller electrical apparatus. Theodore L. Brooks, Port Byron, N. Y.

No. 456,804—Alternating current motor. Allgemeine Elektrizitäts-Gesellschaft, Berlin, Germany.

No. 456,889—Electric circuit breaker for secondary generators. G. Lindenthal, Pittsburg, Pa.

No. 456,558—Electrode for secondary batteries. Wellington Manufacturing Company, New York, N. Y.

No. 456,817—Electric circuit-changing apparatus. American Bell Telephone Company, Boston, Mass.

No. 456,835—Electric condenser regulator. James McBride, Brooklyn, N. Y.

No. 456,843—Secondary battery. Henry Pieper, Liege, Belgium.

No. 456,908—Electric hoisting machine. American Electric Elevator Company, New York, N. Y.

No. 456,598—Electric arc lamp. Sautter, Harle & Co., Paris, France.

No. 456,859—Electric-light crane. Charles H. Shank, Armordale, Kans.

No. 456,683—Attachment for poles for electric wires. Edmond Verstraete, St. Louis, Mo.



NEW YORK TAX REFORM ASSOCIATION.

ROOM 99, 111 BROADWAY.

NEW YORK, 1891.

We substantially concur in the following principles, for the reasons stated, or for other reasons:

1. The most direct taxation is theoretically the best, because it gives to the real payers of taxes a conscious and direct pecuniary interest in honest and economical government.

2. Mortgages and capital engaged in production or trade should be exempt from taxation, because taxes on such capital tend to drive it away, to put a premium on dishonesty, and to discourage industry.

3. Real estate should bear the main burden of taxation, because such taxes can be most easily, cheaply and certainly collected.

4. Our present system of levying and collecting State and Municipal taxes is extremely bad, and spasmodic and unreflecting tinkering with it is unlikely to result in substantial improvement.

5. No legislature will venture to enact a good system of local taxation until the people, especially the farmers, perceive the correct principles of taxation and see the folly of taxing personal property.

Therefore, we desire to unite our efforts, in such ways as may seem advisable, to keep up intelligent discussion and agitation of the subject of taxation, with a view to improvement in the system and enlightenment as to the correct principles.

(Signed)

David A. Wells, Norwich, Conn.	Hugh N. Camp.
George H. Scott (formerly President of Real Estate Exchange).	R. R. Bowler.
George R. Read (now President of Real Estate Exchange).	John H. Inman.
R. H. L. Townsend.	Smith Ely.
Spencer Aldrich.	Amos R. Eno.
F. B. Thurber.	James McCreery.
Henry A. Hurlbut.	Isaac M. Dyckman.
Wm. Gordon Fellows.	Samuel Thorne.
Henry E. Howland.	William Steinway.
Bolton Hall.	Edwin J. Denning.
C. T. Christianson.	John Sinclair.
	Henry Hentz.
	Augustus Richard.
	Thomas G. Shearman.
	James Guant.
	Hall J. How.

Those who approve of the principles above expressed, whether or not they are able to give time or assistance, are requested to communicate with The New York Tax Reform Association, 111 Broadway, N. Y., with a view to some concerted action on this basis.

It is believed that most business men will concur in these opinions, and this call is intended only to bring out such an expression of opinion as will make it possible to organize for the propagation of these views.

THE NATIONAL CONSERVATORY OF MUSIC OF AMERICA,

Nos. 126 AND 128 EAST 17TH ST., NEW YORK.

The annual Entrance Examinations of the National Conservatory of Music, Nos. 126 and 128 East Seventeenth Street, New York, will be held as follows:

Singing—September 24th and 25th, 1891, from 9 A. M. to 12 M.; 2 to 5 P. M.; from 8 to 10 P. M.

Violin, 'Cello, Contrabass, Harp, and all other Orchestral Instruments—September 28th, from 9 A. M. to 12 M., and 2 to 5 P. M.

Piano and Organ—September 29th, 9 A. M. to 12 M., and 2 to 5 P. M.

Orchestra—November 2d, from 4 to 6 P. M.

Chorus—November 4th, from 8 to 10 P. M.

Operatic Chorus—November 2d, from 8 to 10 P. M.

The object of the National Conservatory of Music being the advancement of music in the United States through the development of American talent, applications for admission into the classes of the Conservatory are hereby invited. It is expected that positive aptitude shall be shown by the candidates for admission, without regard to the applicant's stage of progress, and that his or her desire to receive the instruction imparted in the Conservatory shall be the outcome of a serious and well-defined purpose. The successful candidates will enjoy the tuition of the best teachers that can be engaged, and after graduation will be afforded opportunities of making known their accomplishments, thus securing engagements. The conditions of admission as to fees, etc. (varying according to the classification of the pupil), are determined by the Board of Directors. Instruction in all branches will be given free to students whose talent and circumstances warrant it. The course embraces tuition in Singing, Operatic and Miscellaneous, Solfeggio, Stage Department, Elocution, Fencing and Italian, Piano, Organ, Harp, Violin, Viola, 'Cello, Flute, Oboe, Clarionet, Bassoon, French Horn, Cornet, Trombone, Harmony, Counterpoint and Composition, History of Music, Chamber Music, Orchestra and Chorus.

For further particulars, address

CHARLES INSLEE PARDEE, A. M.,

Secretary.

Phono-Chat.

The Columbia Phonograph Company still exhibit the same pluck and enterprise which has characterized them so far as being leaders in the phonograph business.

They have lately placed phonographs in the most prominent hotels, such as the Arlington Hotel and Willard's in Washington, the Carrolton and St. James in Baltimore, the Franklin Hotel in Hagerstown, the Carlin in Frederick, and the Windsor Hotel in Cumberland.

This is quite an acquisition to the hotels in the way of rendering pleasure to the guests.

The Edison General Electric Company declared its seventh quarterly dividend of two per cent., payable August 1st, on July 11th. Transfer books closed July 11th, and reopened August 3d.

The dividend is at the rate of eight per cent. per annum. Such large dividends is evidence of careful and good business management on the part of this wonderfully progressive company.

Mr. Charles Dickinson, one of the Board of Directors of the Chicago Central Phonograph Company, tells us that he has been investing in the stock of the North American Phonograph Company.

This is a wise move on his part, as we predict that this stock will enhance very much in value in the near future.

We were pleased to meet last week Mr. J. Y. At-Lee, the famous whistler for the Columbia Phonograph Company, Washington, D. C.

The musical records made by Mr. At-Lee are peculiarly unique and effective, and we must congratulate the Columbia Phonograph Company on having such a renowned acquisition to their corps of talented musicians.

Mr. G. W. Brown, Secretary and Treasurer of the Arkansaw Edison Phonograph Company, is a Westerner by birth, and has all the vim and enterprise characteristic of the West, combined with the warm-hearted generosity which is so pronounced a type of the Southerner; therefore, the Territory of Arkansaw has in him an able representative for the phonograph; in other words, "the right man in the right place."

Major A. W. Clancy was in the city a few weeks ago. Major Clancy stands very high in the Western country, being the President of the Missouri Phonograph Company, and also Manager of A. S. Barnes Book Concern, of New York City, for the States of Minnesota and Dakota, besides several others.

We have had a visit recently from Mr. Motheral, President of the Western Pennsylvania Phonograph Company. Mr. Motheral has only been elected president of this company since the first of the year, but during his connection has demonstrated a clear and cool business judgment which has enabled him to place the affairs of the Western Pennsylvania Phonograph Company in a highly prosperous condition. Mr. Motheral is one of the many active business men connected with phonograph interests.

The New England Phonograph Company have invaded all the beaches with the melodious music produced by the phonograph. They have placed automatic machines at The Pines, Nantasket Beach, Downer's Landing, "Willows," and numerous other places, so that the New England beaches fairly ring with melody, and the only reason they have not more machines out is that the demand can not be supplied; but this is peculiarly characteristic of the active business management of this company.

Mr. Edward D. Easton, President of the Columbia Phonograph Company, says the *Hackensack Republican*, has no superior in a knowledge of the workings and management of the phonograph, and he is among the leading authorities in the country in the practical application of the science of recording speech by sound. Under his management the Columbia Company, which was organized in 1889, has already made five dividends.

Mr. Easton, it will be recollected, was the first local editor of *The Republican*.

The Prince of Greece visited the Edison Laboratory on his recent visit to New York, and spoke into the phonograph, with which he was highly pleased.

SPLENDID TRIBUTES TO THE PHONOGRAM.

VOICED BY THE PRACTICAL MEN OF AMERICA.

After These Who Can Doubt?

GALVESTON, Texas, *June 29th*, 1891.

To the Editor of THE PHONOGRAM:

DEAR SIR:

Upon glancing through the May number, we find that your valuable paper is increasing in merit and in liveliness of interest in the phonograph business from month to month. We must certainly heartily congratulate you upon the May number; it is brimful of bristling and excellent points in regard to our work and the many uses and eminent practicability of the phonograph.

We feel that the circulation and reading of your magazine will do more than perhaps any other single agency to advance the interests of the phonograph, and bring it permanently before the notice of people who have not always the opportunity of having the different uses and most practical points in regard to the instrument clearly brought before them in any other way.

Yours sincerely,

TEXAS PHONOGRAPH COMPANY.

THE DIKEMAN AUTOMATIC COMPANY,
305 Main Street,
Buffalo, N. Y. }

To the Editor of THE PHONOGRAM:

Permit me to compliment you on the neatness of your publication, and cheerfully recommend same to those who are interested in the business to which it is devoted.

Yours truly,

GEORGE DIKEMAN.

WASHINGTON, Pa., *June 27th*, 1891.

To the Editor of THE PHONOGRAM:

DEAR SIR:

I think the last number of THE PHONOGRAM surpasses any previous issue, both for originality and in point of typography.

I believe that within five years the phonograph and phonographophone will be in as large a number of homes as the piano and organ are now, and will be put to many uses which are only now used by expert operators. As for myself, I would not be without an instrument in the home circle were the rental twice as much. I wish you every possible success.

JOHN O. FROST,

OFFICIAL STENOGRAPHER CIRCUIT COURT,
DIVISION No. 5, 104½, N. BROADWAY.

St. Louis, Mo., *July 11*, '91.

MISSOURI PHONOGRAPH COMPANY, 28 & 29 POPE
THEATER BLDG., ST. LOUIS, MO.

GENTLEMEN:

On the 15th of November, 1890, I rented a phonograph for practical use in my business, with many misgivings as to its ultimate success. After use of nearly two months I find it perfectly practicable and feasible, and I perform more work and in a better manner than I could otherwise do by any other process.

Hitherto I have employed short-hand writers, who took my work from dictation and transcribed it in my office.

From this time forward I shall use the phonograph and would not be without it. For persons having a large correspondence, or those engaged in court work, for lawyers, preachers, and professional men of all kinds, it is the means of saving a vast amount of labor and time. To a busy man it is invaluable.

Persons who have a small correspondence, or a small amount of writing of any kind to do, can utilize the phonograph by dictating their work on the blanks and sending them to a central office to be transcribed. I regard the phonograph as one of the wonders of the age, and as a means of saving a vast amount of labor. There is no doubt that it has come to stay, and that those who first avail themselves of it will show themselves to be capable of appreciating this greatest invention of the age.

Hundreds of these machines are in practical operation in the East, and there is no reason to suppose that they will not operate with equal efficiency in the West. They are no longer an experiment, and the way to save time will be to get one or more of them as soon as possible.

Yours truly,

FRANK E. NEVINS.

MILWAUKEE, Wis., *July 25*, 1891.

To the Editor of THE PHONOGRAM,

We believe that THE PHONOGRAM is needed, and we know that you have given us a first-class magazine. Yours respectfully,

WISCONSIN PHONOGRAPH COMPANY.

Authors and Publishers.

The Dorchester Beacon, of Dorchester, Mass., is an example of enterprise, cultivation, discretion and discernment creditable to the State where it originated and to the nation.

The PHONOGRAM wishes it a journalistic prosperity commensurate with its efforts and deserts. "May its shadow never grow less."

The Woman's Tribune, published in Washington, D. C., and Beatrice, Neb., comes to us redolent with the perfume of woman's encouraging words to women, and sympathy with every movement advanced throughout the world for the betterment of the weaker sex. Its merits, we predict, will secure for it the success for which it so courageously strives.

The National Conservatory of Music, founded by Mrs. Thurber, is an organization founded by a far-seeing, cultivated lady for more than one beneficent purpose. The National Conservatory of Music of America requests, and herein receives, publication of its *modus operandi*, plans for the musical improvement of the public and general arrangement of courses offered to pupils. It is a most praiseworthy undertaking, like "the south wind blowing o'er beds of violets, stealing and giving odors;" for it not only gives to young persons the means of gaining a livelihood, but it elevates and refines them while affording most delightful employment.

The Cosmopolitan is a periodical which in breadth of purpose, latitude of accomplishment and variety of research distances all competitors. It is an emblem of the people it represents and enlightens, its motto being "Excelsior."

The Orange Journal, a spicy, wide-awake paper, contains matter for the grave and gay, and maintains its deserved reputation for excellence in a literary as well as a commercial sense.

The dynamos and motors manufactured by the Card Electric Motor and Dynamo Company, of Cincinnati, are described in detail and well illustrated in the catalogue sent us by the proprietors. Motors of one sixth and one quarter horse-power fill a longfelt and widely experienced want in the field of public necessity, and this enterprising commercial organization here offers just what is needed.

The electric fan is a well-devised apparatus, and the beautiful external ornamentation of the pamphlet will attract attention to the machinery.

A novelty in electric magazines has just reached us, taking its name from the subtle and powerful element that forms the inspiration of its existence. It bears the title of "*Electricity*," and its illustrations are as brilliant and beautiful as the force they represent. Being published in Chicago, it is needless to say that the execution is of the best. Being edited by Messrs. George Heli Guy and J. W. Dickerson, the public is at once convinced that it will be both instructive and entertaining.

We wish this interesting periodical full success and especially commend its purpose of preparing articles suitable to the popular taste outside of scientific circles, as it was upon those lines that THE PHONOGRAM commenced its career.

The Business Woman's Journal, published by the Mary F. Seymour Publishing Company, 38 Park Row, has heretofore been a bi-monthly. It is announced in the July number that the summer edition will be omitted, and in the fall it will be issued monthly. Commencing September 25th, the October number will appear, and will continue to be issued monthly thereafter.

INQUIRIES.

Parties contemplating the purchase of phonographs or in quest of further information pertaining to the phonograph, type-writer, or electrical supplies, are cordially invited to communicate with us.

We make no charge for answers which will be given through the columns of THE PHONOGRAM, or treated as private correspondence if preferred.

PHONOGRAPH IN SUNDAY-SCHOOL.

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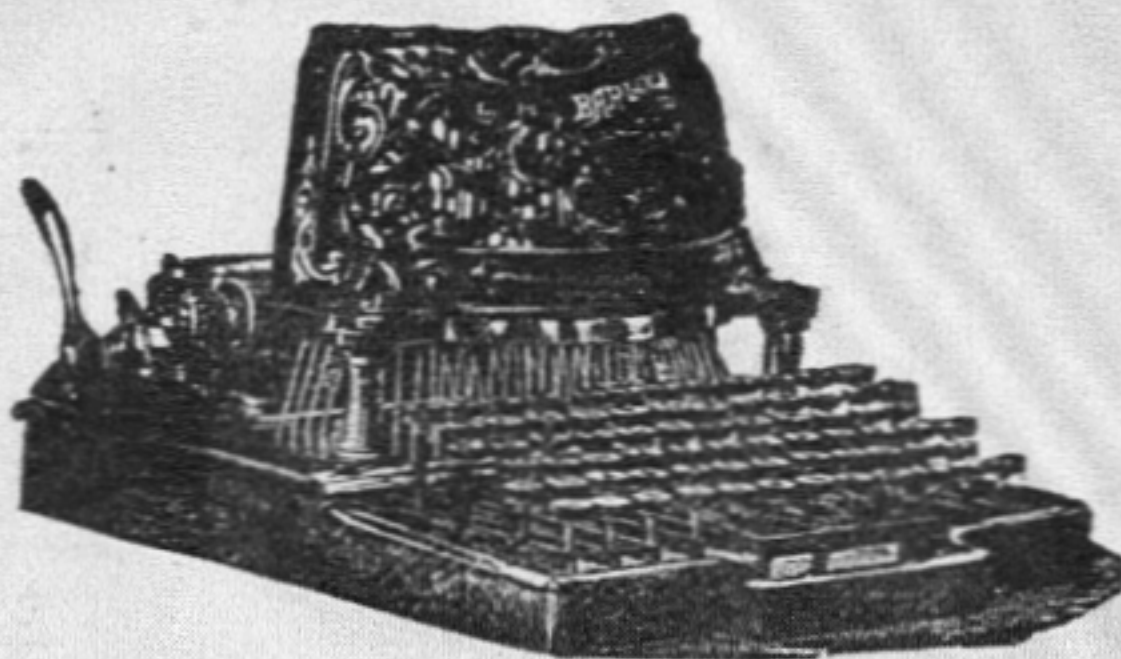
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